

Application Serial No.: 10/681,086
Amendment Dated: June 30, 2009
Response to Office Action Dated: March 30, 2009

AMENDMENTS TO THE CLAIMS

LISTING OF CLAIMS:

Claims 1-22 (cancelled).

Claim 23 (Previously Presented): A process for decoupling production of a target fermentation product from biomass production in a fermentation medium comprising:

(a) providing a recombinantly produced microorganism from the genus *Bacillus* that has been engineered to contain a polynucleotide sequence which encodes biosynthetic enzymes for said target fermentation product,

(b) introducing a mutation causing a biotin auxotrophy into the biotin (*bio*) biosynthetic operon of the microorganism to control biomass production and which does not compromise the ability of the microorganism to produce said target fermentation product, and

(c) supplying the medium with an unlimited amount of substrates required for the production of said target fermentation product and with a limited amount of biotin complementing the auxotrophy;

wherein said target fermentation product is riboflavin.

Claim 24 (Previously Presented): The process according to claim 23 wherein step (b) comprises introducing a polynucleotide comprising a deletion-insertion mutation into the biotin (*bio*) biosynthetic operon of the microorganism to disrupt the microorganism's ability to produce biotin.

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Claim 25 (Previously Presented): The process according to claim 24 wherein the polynucleotide comprises deletion-insertion mutations within a *bioFDB* gene cassette.

Claim 26 (Previously Presented): The process according to claim 23 wherein the introducing step comprises transforming the microorganism with a polynucleotide sequence comprising a *bioFDB* deletion-insertion mutation.

Claim 27 (Previously Presented): The process according to claim 26 comprising transforming the microorganism with a polynucleotide sequence comprising SEQ ID NO:1.

Claim 28 (Previously Presented): The process according to claim 27 further comprising selecting for transformation of the microorganism.

Claim 29 (Previously Presented): The process according to claim 28 wherein selecting for the transformation comprises selecting for antibiotic resistance.

Claim 30 (Previously Presented): The process according to claim 29 wherein selecting for the transformation comprises selecting for neomycin resistance.

Claim 31 (cancelled).

Claim 32 (Currently Amended): A riboflavin production microorganism made by the process of claim 23.

Claims 33-40 (cancelled).

Claim 41 (Previously Presented). The process according to claim 23 wherein the mutation causing the biotin auxotrophy is in *bioW*.

Claim 42 (Previously Presented). The process according to claim 23 wherein the mutation causing the biotin auxotrophy is in *bioA*.

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Claim 43 (Previously Presented). The process according to claim 23 wherein the mutation causing the biotin auxotrophy is in *bioF*.

Claim 44 (Previously Presented). The process according to claim 23 wherein the mutation causing the biotin auxotrophy is in *bioD*.

Claim 45 (Previously Presented). The process according to claim 23 wherein the mutation causing the biotin auxotrophy is in *bioB*.